

<i><b>Term</b></i>	<i><b>Definition</b></i>
EQUIVALENCE CLASS	Complete group of conditions to test which result from one requirement or set of requirements
PERFORMANCE MEASURES	Discrete set of measures to be applied to specific test components
FCC (FEDERAL COMMUNICATIONS COMMISSION)	U.S. government agency established by the Communications Act of 1934 which regulates all interstate communications.
FID (FIELD IDENTIFIER)	Field Identifier. A code used when administering usage limits on residence and business end users. Also refers to fields of information used in the service order.
FOC (FIRM ORDER CONFIRMATION)	A response from the BellSouth Service Order Processor that acknowledges a successful receipt of an order from a CLEC. Includes the specified due date – i.e. commitment date
FLOW-THROUGH	An order placed by a CLEC's customer service representative that can be provisioned correctly without manual intervention by BellSouth's service representatives.
ILEC (INCUMBENT LOCAL EXCHANGE CARRIER)	Incumbent Local Exchange Carrier. The local exchange carrier for a particular area as of 1996. BellSouth is the relevant ILEC.
INSPECTION	Physical reviews of process activities and products, including site visits, walk-throughs, read-throughs, and work center observations.
INP (INTERIM NUMBER PORTABILITY)	The use of existing and available call routing, forwarding, and addressing capabilities to enable an end user to retain the same telephone number regardless of which local service provider is chosen.
ISDN (INTEGRATED SERVICES DIGITAL NETWORK)	Switched network providing end-to-end digital connectivity for the simultaneous transmission of voice, data, video, imaging and fax over several multiplexed communications channels. Employs high-speed, out-of-band signaling protocols that conform to international standards. Signaling and communications are separate, therefore reduces network blockage and provides faster connectivity

<i><b>Term</b></i>	<i><b>Definition</b></i>
	for users.
IXC (INTEREXCHANGE CARRIER)	Provider of long-distance service.
LATA (LOCAL ACCESS AND TRANSPORT AREA)	Local Access and Transport Area. A geographic area established by law within which a Bell Operating Company may provide telecommunications services.
LCSC (LOCAL CARRIER SERVICE CENTER)	Local Carrier Service Center. Customer service center which receives CLEC calls on the BellSouth side.
LENS (LOCAL EXCHANGE NAVIGATION SYSTEM)	Pre-Ordering system which is able to allow CLECs visibility into the Customer Service Record data prior to ordering service with a potential customer. It also supports ordering functionality. Such pre-ordering data includes: (1) telephone number; (2) listed name; (3) listed address; (4) directory listing information; (5) directory delivery information; (6) billing name; (7) billing address; (8) service address; (9) product and service information; and (10) PIC and LPIC. Does not include credit information at this time.
LEGAL AND REGULATORY REQUIREMENTS CRITERIA SOURCE	This includes requirements specified by statute and regulation, such as FCC orders, court orders, regulations, federal and state statutes, and other binding requirements resulting from judicial/governmental proceedings.
LIDB (LINE IDENTIFICATION DATABASE)	Line identification database. Allows validation of credit card, Billed-to Third Party and Collect calls. Subscribing CLECs are required to interface with BellSouth's LIDB locations as described and listed in the applicable tariffs. No optional network features are associated with this service.
LOCAL LOOP	The telephone line that runs from the local telephones company to the end user's premise.
LOGGING	Monitoring activities and collecting information by logging process events and products as they happen. Logging can be mechanized or manual.
LNP (LONG TERM NUMBER PORTABILITY)	Long Term Number Portability

<i><b>Term</b></i>	<i><b>Definition</b></i>
LPIC (LOCAL PRIMARY INTEREXCHANGE CARRIER)	Predesignated Intra-LATA Carrier, or Local Primary Interexchange Carrier. Telephone company chosen by the end user as being the default carrier for calls outside the local calling area, but within the same LATA. These are also known as regional toll calls.
LSR (LOCAL SERVICE RECORD)	Standard set of forms and data required by the ILEC from the CLEC in order to set up, provision, and bill the CLEC for reselling ILEC services to end users.
MASTER TEST PLAN	Identifies the overall framework and structure of the test.
MDF (MAIN DISTRIBUTION FRAME)	Main Distribution Frame. The primary point at which outside plant facilities terminate within a Wire Center for interconnection to other telecommunications facilities within the Wire Center.
MLT (MECHANIZED LOOP TEST)	Provides loop testing on the customer's line number.
NID (NETWORK INTERFACE DEVICE)	Network Interface Device. Used to connect the loop facility to the customer premise inside wiring. The NID serves as a point of interconnection and includes electrical protection primarily for personnel safety. The NID may or may not provide remote testing and trouble sectionalization capabilities. The NID UNE allows a CLEC to connect its loop to the inside wiring portion of BellSouth's NID. A facility-based CLEC is expected to provision a CLEC loop and a NID to the customer premise. If the CLEC purchases the NID UNE, the CLEC may perform a physical cross-connect of the inside wire to its loop using a BellSouth NID.
OBF (ORDERING AND BILLING FORUM)	The Ordering and Billing Forum has designed standard forms to be used when ordering telecommunications products (such as LSRs). The OBF provides a forum for customers and providers in the telecommunications industry to identify, discuss and resolve national issues which affect ordering, billing, provisioning and exchange of information about access services, other connectivity and related matters.

<i>Term</i>	<i>Definition</i>
ODUF (OPTIONAL DAILY USAGE FILE)	Contains information on billable transactions for resold lines, interim number portability accounts and some unbundled network elements such as unbundled ports.
OPERATIONAL ANALYSIS	Operational analysis focuses on the form, structure, and content of the business process under study. This method is used to evaluate day-to-day operations and operational management practices.
ORDERING	The process and functions by which resale services or unbundled network elements are ordered from the ILEC – the process by which an LSR or ASR is placed with the CLEC.
ORDERING AND PROVISIONING DOMAIN	Tests related to CLEC's acquisition of customer information, placing orders, and ensuring correct and timely provision and notification of order status.
OSS (OPERATION SUPPORT SYSTEMS)	Operation Support Systems. Systems used to perform pre-ordering, ordering, provisioning, maintenance and repair, and billing.
PBX (PRIVATE BRANCH EXCHANGE)	Private Branch Exchange. Routes calls: <ul style="list-style-type: none"> <li>• between people located within the organization</li> <li>• from users in an organization to people outside</li> <li>• from people outside to users in the organization</li> </ul>
PERFORMANCE AND CAPACITY	Methods used to evaluate the performance and capacity of selected elements within the four domains. Relates to tests to determine if BellSouth's OSS can handle quantities of orders matching a reasonable forecasted demand.
PIC (PRIMARY INTEREXCHANGE CARRIER)	Primary Interexchange Carrier. The long distance company to which traffic is automatically routed when an end user dials 1+ in equal access areas.
PORT	Point of access into a network.
POTS (PLAIN OLD TELEPHONE SERVICE)	Plain Old Telephone Service

<i><b>Term</b></i>	<i><b>Definition</b></i>
PMAP (PERFORMANCE MEASUREMENT & ANALYSIS PLATFORM)	A performance reporting database that monitors and archives performance metrics for BellSouth retail and wholesale operations
PREDICTOR	BellSouth system that is used by TAFI to confirm how the central office is programmed for a specific customer's line; identifies and verifies the line features present on the customer's line.
PRE-ORDERING	The process and functions by which vital information is obtained, verified or validated prior to placing a service request. Access to preordering information is necessary to ensure the smooth provisioning and delivery of requested service, avoiding fall-out and the need for manual intervention due to downstream problems.
PRI (PRIMARY RATE INTERFACE)	Access method to integrated services digital network (ISDN). Provides 23 B + 1 D channels operating at 1.544 Mbps in the U.S.; or 30 B + 1 D channels operating at 2.048 Mbps in Europe.
PROVISIONING	The process and functions by which necessary work is performed to activate a service requested via a LSR or ASR and to initiate the proper billing and accounting functions.
QUALITY GATE	A decision point where the quality of phase work products is assessed based on previously defined criteria. Input to a Quality Gate is a set of baselined work products and a recommendation from the team. Based on these inputs, various actions can take place such as risk assessment, escalation, or a no-go decision.
RELATIONSHIP MANAGEMENT AND INFRASTRUCTURE DOMAIN	Tests relating to activities, processes and documents that are focused on the establishment and maintenance of the CLEC/ILEC relationship.
REPORT REVIEW	Reviews and analysis of historical data, reports, metrics, and other information in order to assess the effectiveness of a particular system or business function. This includes performance measurement reports and other management reports.
RESALE HANDBOOK	User documentation for CLEC that describes how to establish a reseller, the technical specifications

<i>Term</i>	<i>Definition</i>
	for interacting with BellSouth, and the business rules resellers should follow in order to resell BellSouth products and services on an unbundled basis.
SCALABILITY	The degree to which an application can be scaled to accommodate order of magnitude increases in transaction volumes and users.
SEVERITY 1 TEST EXCEPTION	An error which causes a program or system interrupt or which causes program execution to abort. AT&T and BELL System personnel refer to this type of error as a "show stopper". This error has the highest severity rating.
SEVERITY 2 TEST EXCEPTIONS	A severe error which causes a program not to perform properly or to produce unreliable results. Normally, the user cannot find an appropriate "workaround" for this type of error.
SEVERITY 3 TEST EXCEPTIONS	An error for which, while not minor, a "workaround" solution can be found for the user.
SOCS (SERVICE ORDER CONTROL SYSTEM)	A BellSouth OS which routes service order images among BellSouth drop points and BellSouth Operations Systems during the service provisioning process. SOCS uses coding placed on the Service Order by the Service Representative or by a front-end logic in systems such as DOE, SONGS, RNS and LESOG.
SUPPLEMENTS	A change to an order taken after the original order was submitted, but before the order has been executed. Order execution should include all supplements.
SWITCH	Electronic device which opens or closes circuits, changes operating parameters or selects paths either on a space or time division basis.
TAFI (TROUBLE ANALYSIS FACILITATION INTERFACE)	A rules-based computer system providing automated trouble receipt and screening functionality to BellSouth users in the Residence Repair Center (RRC) and the Business Repair Center (BRC)
TEST CASE	A document comprised of a set of test inputs, execution conditions, and expected results for verifying compliance with specific requirements or evaluating system operations.

<i><b>Term</b></i>	<i><b>Definition</b></i>
TEST CONDITIONS	Specific to a thread or iteration at a high level and should state what action is to be taken to accomplish a specific expected result with a step-by-step detail.
TEST CYCLES	A discrete set of test cases to be executed in a pre-defined order.
TEST DOMAIN	A specific testing area with defined targets, measures, scenarios, evaluation methods, and test processes.
TEST SCENARIOS	Scenarios describe realistic situations in which CLECs purchase wholesale services and network elements from BellSouth for resale to the CLEC's end-user customer on a retail basis.
TEST SCRIPT	The clearly and completely defined steps which a tester must step through in order to complete a test.
TN (TELEPHONE NUMBER)	Telephone number.
TRANSACTION PROVISIONING	The CLEC case method requires extensive participation by the Phase 2 tester to observe the execution, measure and monitor progress and results, and inspect and audit the execution and results.
TRANSACTION DRIVEN SYSTEM ANALYSIS	Transaction driven system analysis relies upon initiation of transactions, tracking of transaction progress, and analysis of transaction completion results to evaluate the automated system under test.
UNBUNDLED ACCESS	Ability of other LECs to access and use BellSouth network components to fill in gaps where these providers' networks do not have their own facilities.
UNBUNDLED INTEROFFICE TRANSPORT – SHARED	Provides a transmission path between switching locations that allows a call to be transported from one location to another. These facilities/trunks groups may be configured in various transmission configurations (e.g. DS1, OC3, etc.) based on total shared network requirements between each BellSouth Telecommunications end office and the BellSouth tandem.

<i><b>Term</b></i>	<i><b>Definition</b></i>
UNBUNDLED DIGITAL LOOP	A transmission channel between an end user location and LEC central office that is not a part of, or connected to, other LEC services. This facility will allow the end user to send and receive traffic using such technologies as ISDN, enhanced electronics capabilities such as HDSL/ADSL, and high-capacity services such as DS1 when the loop is connected to the proper packet/circuit switch. This facility will include an NID at the end user customer location for the purpose of connecting the loop to the customer's inside wire. UDLs can be configured as 2W ISDN, 2W Enhanced Electronics, 4W DS1 & ISDN, or 4W Enhanced Electronics. On 2W and 4W facilities, BellSouth does not provide the Enhanced Electronics.
UNBUNDLED VOICE LOOP	A dedicated transmission facility from BellSouth's main distributing frame (MDF) to a customer premise. The facility will allow an end user to send and receive normal voice communications traffic when connected to a dial-tone providing switch or via a designed point-to-point facility to CPE at another customer premise. This facility will include a Network Interface Device (NID) at the customer's location for the purpose of connecting the loop to the customer's inside wire. UVLs can be configured as 2-wire or 4-wire facilities.
UNBUNDLED PORT	An interface on a local switching system that is not bundled with a loop or transport facility, and provides access to and from the switch and the functionality of the local switching system.
UNE (UNBUNDLED NETWORK ELEMENT)	Unbundled Network Element
USOC (UNIVERSAL SERVICE ORDER CODE)	Universal Service Order Code. A 3-5 character alphanumeric code that represents a product or service.
V-CLEC	Virtual Competitive Local Exchange Carrier. A term created by Consulting Firms within the Telecommunications Industry to denote a "non-revenue generating business entity, used only for the appearance of appearing real to the legacy Operational Support Systems within RBOCs".
VIRTEL	A Competitive Local Exchange Carrier (CLEC), begun by employees of Ernst & Young, to act as a



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<i><b>Term</b></i>	<i><b>Definition</b></i>
	Virtual CLEC to gain entry into 271 Compliance issues created out of the 1996 Telecom Act. VirTel's business plan states that it will "never acquire customers."

**Flow-Through Audit  
Plan**

# **Flow-Through Audit Plan**

*Version 1.1*

**May 27, 1999**

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## **Flow-Through Audit Plan**

### ***1. Flow-Through Description***

A key element in the ability of a Competitive Local Exchange Carrier (CLEC) to compete in the local telecommunications market is the ability of the CLEC's order to "flow through" the incumbent carrier's Operations Support Systems (OSS). Flow-through is defined as electronic transmission through a gateway and acceptance into the incumbent's (in this case BellSouth's) back-office ordering systems without manual intervention. In its Second BellSouth Louisiana Order, the Federal Communications Commission emphasizes the importance of flow-through in demonstrating that BellSouth processes competing carriers' orders in a nondiscriminatory manner.<sup>1</sup>

The flow-through measure is defined as the percentage of valid orders that are processed without manual intervention. Specifically, it is the number of Local Exchange Service Order Generator (LESOG)<sup>2</sup> eligible, valid and syntactically correct Local Service Requests (LSRs) submitted from CLECs to the Service Order Control System (SOCS).

BellSouth publishes a flow-through report on a monthly basis to allow participants an opportunity to evaluate BellSouth and CLEC flow-through ratios

### **Flow-Through Measure Computation**

The flow-through measure is computed as the ratio of two key elements: the numerator is the total number of service requests that flow-through to BellSouth's back-office systems (SOCS), while the denominator is the total number of valid service requests delivered to BellSouth's OSS. The amount of flowed through requests measures the number of valid service requests which flow through to the BST OSS during the reporting period. The number of service requests submitted measures the number of valid service requests submitted during the reporting period including resubmissions. The total number of valid service requests delivered to the BST OSS consists of four elements:

- Total mechanized LSRs
- Less:
  - Manual Fallout
  - Auto Clarification
  - CLEC caused fallout

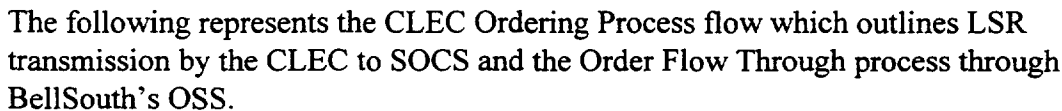
Flow – Through

$$= \frac{\text{Issued Service Orders (LESOG Flow-Through)}}{\text{Total Mechanized LSRs} - (\text{Designated Manual Handling} + \text{Auto Clarify} + \text{CLEC-caused Fallout})} \times 100\%$$

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<sup>1</sup> FCC Second Louisiana Order, paragraph 107

<sup>2</sup> Refer to Appendix A: Overview of Applications for details of BellSouth OSS



Flow-through reports are a compilation of data retrieved from the Performance Measurement database (data warehouse) which measures the percentage of LSRs submitted electronically that utilize BellSouth's ordering OSS without manual intervention. The Performance Measurement database is compiled from data extracted from LEO, SOCS, LON, CRIS, and CABS. The data extracted from the data base used to calculate the percentage of flow-through LSRs includes every mechanized service request submitted to the gateway systems (EDI, LENS and now TAG) that are LESOG eligible. Several types of service requests are eliminated prior to LESOG service order generation, including the complex orders ISDN, hunting, PBX trunks, Synchronet®, and services with special pricing. These types of orders require manual handling and input by BellSouth retail representatives. The total rejects, i.e., service requests that contained CLEC errors and that require manual handling, are subtracted from the total service requests entering LESOG. This provides the number of service requests that can be forwarded through to SOCS (LESOG eligible). The final number of service requests that flowed through to SOCS is the numerator, and the total number of service requests that were truly LESOG eligible is the denominator used to calculate the aggregate percentage of service requests that successfully flow-through the ordering OSS.

## 3

The goal of the Flow-Through Audit is to ensure that the performance measures reported in BellSouth's monthly flow-through report are accurate and the flow-through measurement data is valid. The audit will also include a review of BellSouth's error analyses to ensure that the attribution between CLEC-caused and BellSouth-caused fallout is accurate. This assessment will be conducted through a combination of transactional and operational testing.

The following objectives provide an overview of the audit testing requirements for evaluating order flow-through:

- The functionality and existence of mechanized and manual edits and procedures support the integrity of the flow-through measure data.
- The flow-through measurement computation is designed with the appropriate measure elements and structure.
- Data sources are accurate and reliable.
- Error handling identifies and returns data validity, accuracy, completeness and format errors throughout the flow-through process.

The first dimension of the test will be transactional. Transactional testing consists of generating, submitting and logging test orders. Testing will be accomplished through the test tools employed in the Third Party OSS Test required by the Georgia Public Service Commission<sup>3</sup> and set out in the corresponding Master Test Plan.<sup>4</sup> These test tools are designed to test all aspects of interfacing with BellSouth's OSS. The results collected from the test management tools will be compared to the corresponding BellSouth measures collected through BellSouth's performance measurement system, which logs and publishes OSS-related measures on a monthly basis. Any variances will be identified and analyzed.

The second dimension of the test will be operational. Operational analysis is a multi-dimensional test method focused on the form, structure, and content of the test target. This testing method addresses the organizational, process, and technology aspects of flow-through reporting. Data sourcing, mechanized and manual data edits, and calculation methodologies will be reviewed to determine that the system design supports accurate reporting.

### ***3. Transactional Test Description***

#### ***3.1. Entrance Criteria***

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<sup>3</sup> Order on Petition for Third Party Testing, p.3

<sup>4</sup> Georgia OSS Evaluation Master Test Plan, III-5

The following criteria must be met in order for testing to begin:

- Test data loaded in BellSouth and test systems
- Target performance metrics identified
- Auditor understanding obtained of error checking process including types, causes and criteria
- Auditor understanding obtained of manual error handling criteria
- Third Party test management tools installed and operational
- Appropriate level of performance measure tracking identified
- Sorting keys required for BellSouth and Third Party test tools to separate test transactions identified
- Performance metrics evaluation criteria defined and approved
- Exceptions reporting process defined
- Exceptions reporting template created

### ***3.2. Transactional Test Scope***

Transactional testing consists of transaction processing and performance comparison. Transaction processing is mechanical generation, submission and logging of transactions. Performance comparison is the process of comparing data obtained from the BellSouth performance measurement system to data obtained from the Third Party test management tools for the same transaction.

Transactional testing will be conducted for all order types that are capable of mechanized flow-through. Those order types correspond to all simple resale services and features, as well as certain UNE services and features. These services and features are detailed in Figure II. All of these mechanized order types are in scope for flow-through testing.

<i><b>Product Type</b></i>	<i><b>Product or Service</b></i>
Simple Resale	<ul style="list-style-type: none"> <li>• Flat Rate Residence</li> <li>• Measured Rate Residence</li> <li>• Touchtone</li> <li>• Optional Calling Plan (OCP)</li> <li>• Integrated Package - Area Plus® with Complete Choice®, Complete Choice®</li> <li>• Flat Rate/Basic Local Exchange</li> <li>• Measured Rate Business</li> <li>• Georgia Community Plan</li> <li>• Area Plus®</li> <li>• Visual Director®</li> <li>• Custom Calling - Speed Calling 8 &amp; 30</li> <li>• Custom Calling - 3 Way Calling</li> <li>• Custom Calling - Call Forward Variable</li> <li>• Custom Calling - Remote Access to CF</li> <li>• RingMaster®</li> <li>• Message Telephone Service (MTS)</li> <li>• TouchStar® - Call Tracing</li> <li>• TouchStar® - Call Block</li> <li>• TouchStar® - Call Selector</li> <li>• TouchStar® - Call Return</li> <li>• TouchStar® - Repeat Dialing</li> <li>• TouchStar® - Preferred Call Forwarding</li> <li>• MemoryCall®</li> <li>• MemoryCall® Answering Service</li> <li>• Caller ID</li> <li>• Call Waiting</li> <li>• Call Waiting - Deluxe</li> <li>• Customized Code Restriction</li> <li>• Enhanced Caller ID</li> <li>• Remote Call Forwarding (RCF)</li> </ul>
UNE	<ul style="list-style-type: none"> <li>• 2-wire Analog Loops (w/ and w/o number portability)</li> <li>• 2-wire Analog Switch Ports</li> <li>• 2-wire Analog Loop-Port combinations</li> <li>• INP, LNP</li> </ul>

*Figure II – Orders with Mechanized Flow-Through*



For each product or service, the order can be errored or error-free. All errored orders should be returned to the CLEC automatically or classified by a Local Carrier Service Center (LCSC) service representative and either returned to the CLEC or corrected (in the case of BellSouth errors) and sent forward. Error-free orders should flow through, unless they correspond to complex services that are designed to fall out for manual handling. The range of error types that will be submitted in transactional testing is included in Figure III.

<b>Error Type</b>	<b>Error Handling</b>	<b>Detecting System</b>
Error-free Order	None	None
	Designated for Manual Handling	LESOG
Data Validity Error	Fatal Reject	LEO
	Auto-clarification	LESOG
Data Accuracy Error	Auto-clarification	LESOG
Data Completeness Error	Fatal Reject	LEO
Data Format Error	Fatal Reject	LEO
Other Error	System Error	LESOG / SOCS

*Figure III - Error Types*

### **3.3. Test Activities**

The following testing activities comprise transactional testing:

1. Execute Third Party testing as specified in the Third Party OSS Evaluation Master Test Plan
2. In areas not covered in the Master Test Plan's ordering sections, such as resale, execute additional testing based on existing resale scenarios in other sections of the Master Test Plan
3. Acquire and format performance data files delivered by test management tools from Third Party testing
4. Verify that transactions expected to error did so, and that those expected to be successful were
5. Flag any deviations from expectations and investigate
6. Compile final flow-through results based on previous and current test management tool data
7. Compare disaggregated BellSouth performance results with test management tools' flow-through results
8. Flag any exceptions in results comparison
9. Log exceptions in exceptions reporting template
10. Identify and quantify root cause for variances in results
11. Troubleshoot any exceptions and determine resolution procedure
12. Resolve exceptions in accordance with the exceptions resolution process
13. Generate comparative analysis results reports

### 3.4. Exit Criteria

- Comparative analysis report completed
- Variance findings documented
- Variance findings explained
- Test cycle results summary report created
- Results summary and reports delivered

## 4. Operational Test

Test Type	Description
Inspection	Physical review of activities, documents and systems
Interviews	Directed conversations with BellSouth personnel
Observation	Monitoring activities and collecting information by observing and logging events as they occur
Document Review	Review and analysis of policies, procedures, publications and logs

*Figure IV - Operational Analysis Evaluation Techniques*

Detailed and comprehensive evaluation checklists will be developed for all test objectives to be analyzed through operational analysis. These checklists will serve as objective criteria to be applied to inspection, interview, observation and document review activity.

### 4.1. Scope

The following activities fall into the scope of operational analysis:

- Manual error attribution processes
- System error resolution processes
- Change control over:
  - mechanized error analysis
  - calculation methodologies
- System security
- System scalability

#### 4.2. Activities

Operational analysis activities will include:

Test Type	Test Target
Inspect:	Scalability of systems intervening in flow-through
	Physical security of systems intervening in flow-through
	Logical security of systems intervening in flow-through
Interview:	Administrators of intervening systems
	Mechanized error analysis developers
	Manual error attribution SME
Observe:	LCSC error resolution
	Reperform LCSC error resolution process
Document Review:	Order flow-through flowcharts
	Change control policies
	Change control logs
	System specifications
	System architecture documents
	System security policies
	Error description documents

*Figure V - Operational Analysis Activities*

## **Appendix A: Overview of Applications**

### ***TAG***

The Telecommunications Access Gateway system (TAG) is a transaction-based messaging system with data translation. TAG provides a bi-directional flow of information from a CLEC to the BST OSS and from the BST OSS to the CLEC. In order for BST to provide information to the CLEC, the TAG system transforms the incoming request into a message that can be understood and routed to LEO as an ordering contract or directly to the Business Logic Processor (BLP) for pre-ordering. Therefore, TAG includes the gateway and BLP and creates contracts recognized by the OSS.

The objective of the TAG system is to provide CLECs and BST Retail Systems the ability to access pre-ordering and ordering functionality provided by BST OSS.

The TAG system functionality supports pre-ordering:

- Address Validation
- Telephone Number Assignment
- Appointment Availability
- Service Availability and
- Retrieval and View of the Customer Service Record.

TAG also supports Firm Order functionality including:

- Local Service Request (LSR) Submission,
- Purchase Orders by Company Code requests,
  - Order Status, Firm Order Confirmation, Completion Notice, and Error Messages for a selected Purchase Order Number (PON) views,
- LSR retrievals, and
  - Automatic Return of FOCs, Rejects, Confirmation Notices, and Jeopardies.

The CLEC must be able to initiate a request either through a Lan-to-Lan or internet connection through a CORBA (Common Object Request Broker Architecture) interface. CORBA is a middle ware software application, which facilitates client and host server communications. Transmission through the Lan-to-Lan interface will be accomplished through a secure router into the BOSIP network to the TAG gateway. Internet access will be accomplished through secure firewalls into the BOSIP network to the TAG gateway.

## **Appendix A: Overview of Applications**

(Continued)

A transaction is transmitted from a CLEC. The transaction enters TAG via the CORBA server. TAG processes the transaction creating messages to the appropriate inquiry or order BLP. TAG uses the CORBA to Navigator Bridge to pass Firm Order OSS transactions (Local Service Requests) through the LSR Router to LEO. LEO processes the transaction, returning FOCs, Errors, Jeopardies, and Rejects to TAG. TAG uses the CORBA Client to pass pre-Ordering inquiry transactions to the BLP. The BLP passes the transaction to the appropriate pre-ordering OSS. Communication between TAG and the pre-ordering databases is in a CORBA format using TCP/IP protocols.

### ***EDI***

The EDI Gateway consists of a Harbinger Trusted Link Gateway and a Harbinger Trusted Link Translator running on an MVS mainframe. It supports:

- Transmission of orders,
- Acknowledgment of receipt of orders,
- Transmission of order error notices,
- Transmission of order jeopardy notices,
- Confirmation of firm orders, and
- Notification of the completion of orders.

The gateway is a collection of secure electronic mail boxes. Electronic mail from a CLEC is initially received by the EDI translator in an industry standard ANSI X.12 format. The translator strips the mail of the "electronic envelope" and transforms it into a flat file usable by the application programs. If the message fails to conform to the standard format, the EDI translator rejects it; otherwise, it deposits the translated message into a file that is retrieved by LEO and stored in the LEO database and control system.

EDI may be accessed through direct network connection, secure dial-in at speeds from 4.8bps to 14.4 bps, or by using a Value Added Network (VAN).

BST's VAN of choice for local exchange ordering is Harbinger. The CLEC may use a different VAN of their choice since the VANs are interconnected. BST is connected to the VAN by a dedicated T1 link supporting 56 KB per second transfer rate. Harbinger delivers mail every 15 minutes into a "hot mailbox" which activates the translator.

## **Appendix A: Overview of Applications**

(Continued)

### **LEO**

The Local Exchange Ordering (LEO) database and control system consists of three main components: an IMS-DC application running on a mainframe using a DB2 database, a service order monitoring application running on an HP UNIX server, and an IMS on-line work management system running on the same mainframe as the database application.

Orders arriving from the EDI Translator are placed into the database and control system using a remote IMS transaction triggered by the placement of the file by the translator. These transactions load the data into the database, check the data for basic validity, and pass it to the Local Exchange Service Order Generator (LESOG).

The service order monitoring application receives copies of the service order when its status changes in the Service Order Control System (SOCS). The application transmits pertinent information to LESOG using a proprietary file transfer system that has persistent delivery and verifies the data transmitted. The files are batch transmitted every thirty minutes. A confirmation file is transmitted back to the monitoring application upon receipt of the data. Failure to receive the confirmation before the next transmission causes alarms. This application is written in the C programming language and runs on a HP T520. It is monitored using Tivoli.

### **LESOG**

The Local Exchange Service Order Generator converts the service request into a BST internal service order and places it into SOCS. It receives its input from LEO and checks for data validity and data accuracy. This action starts the processing of the order. It communicates with operations support systems to obtain data needed for the order generation. This communication is by TaskMate terminal emulation programs. Any errors are transmitted to the LEO database and control system via BST Navigator. This application runs on two HP T520 systems monitored by Tivoli.

LESOG edits data for validity. Rejects are either returned to the CLEC or are placed in the work management system for manual handling. (See Error and Reject Processing for more information.)

Manual handling is required if:

- The service order is for a complex service designated for manual handling,
- The service order is rejected due to a problem with a BST system,
- The service order could not be routed to the local service order generator,
- The generator system detects an error not designated for automatic clarification.

## **Appendix A: Overview of Applications**

(Continued)

The work management system includes a set of prioritized queues from which service representatives retrieve work and update the database so the control system can track the work. This software is coded in the COBOL II programming language.

### **DOE**

The Direct Order Entry (DOE) systems provides BST with a means to perform pre-ordering and ordering functions in the states of North Carolina, South Carolina, Georgia, and Florida. DOE is a legacy mainframe application, which requires BST representatives to have intimate knowledge of special internal codes in order to perform pre-ordering and ordering functionality for business orders.

### **SONGS**

The Service Order Negotiation System (SONGS) provides BST with a means to perform pre-ordering and ordering functions in the states of Kentucky, Tennessee, Alabama, Mississippi, and Louisiana. SONGS is a legacy mainframe application, which requires BST representatives to have intimate knowledge of special internal codes in order to perform pre-ordering and ordering functionality for business orders.

### **SOCS**

The Service Order Control System (SOCS) receives service orders from LESOG and routes the service orders to their appropriate downstream provisioning and billing systems. SOCS, and systems that further process SOCS orders, treat LESOG service orders the same as service orders from internal BST systems.

### **CRIS**

The Customer Record Information System (CRIS) is a legacy mainframe database which stores customer information and billing information for each customer. Daily usage data for each customer is transferred into CRIS daily.

### **CABS**

The Carrier Access Billing System (CABS) is a legacy mainframe database which stores interexchange carrier (IXC) information and the billing information associated with access services provided to IXCs. Daily access usage for each customer is transferred into CABS daily.

### **LON**

The Local Order Number System (LON) is a database which stores CLEC LSR order information received via non-mechanized means (fax or mail). The information necessary to process the LSR is manually entered via LCSC reps when received, resulting in the generation of a local order number which is used to track the physical copy of the LSR. LON is also used to capture information from mechanized order fallout, for re-entry into the legacy BellSouth ordering platforms, DOE or SONGS.